

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte Gregory Richard Hintermeister et al.

Appeal No. _____
Application No. 09/659,258

APPEAL BRIEF

CERTIFICATE OF ELECTRONIC TRANSMISSION

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March 24, 2008
Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Gregory Richard Hintermeister et al.	Art Unit:	2173
Application No.:	09/659,258	Examiner:	Namitha Pillai
Filed:	September 11, 2000		
For:	PICTORIAL-BASED USER INTERFACE MANAGEMENT OF COMPUTER HARDWARE COMPONENTS		

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Commissioner for Patent
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APPEAL BRIEF

I. REAL PARTY IN INTEREST

This application is assigned to International Business Machines Corporation, of Armonk, New York.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-4, 8-12, 14-16, 18-26, 30-32, 34, 35 and 37-41 are pending in the Application, stand rejected, and are now on appeal. Claims 5-7, 13, 17, 27-29, 33, 36 and 42-45 have been canceled.

IV. STATUS OF AMENDMENTS

There have been no amendments filed subsequent to the rejection mailed September 20, 2007.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Applicants' invention is generally directed to an apparatus, program product and method that utilize a displayed pictorial representation that depicts the actual physical configuration of a plurality of hardware components in a physical computer system to facilitate the collective management of the underlying hardware components. Specifically, the apparatus, program product and method display a pictorial representation of a plurality of hardware components and the physical configuration of each hardware component. In response to user input, a selected status for multiple hardware components is indicated, where such indication includes (1) selecting a filter criterion from a plurality of predetermined filter criteria; (2) comparing attributes associated with the plurality of hardware components against the selected filter criterion; and (3) selecting those hardware components associated with attributes that match the selected filter criterion. After indicating the selected status for the multiple hardware components, the apparatus, program product and method dynamically retrieve a list of available management operations, display the list of available management operations within a context sensitive menu after indicating the selected status, and perform a management operation.

Conventional GUI-based component managers, on the other hand, typically identify the location of a hardware component by identifying the slot or port to which such a component is connected. Looking at the actual computer, however, specific slots or ports may be difficult to locate, and a user may have difficulty in physically locating specific hardware components in the computer. (Application, page 2, lines 17-21). This problem is significantly greater in complex multi-unit computer systems such as servers, midrange computers and mainframe computers, where the number of manageable hardware components can be overwhelming. For example, some enterprise-level storage systems are capable of housing hundreds of individual disk drives in large physical enclosures, and simply providing a user with a slot location in an enclosure for a particular disk drive may still leave the user with the daunting task of locating that particular slot among hundreds in the physical enclosure. In short, there is little information provided in

conventional GUI environments that interrelates the logical location of a hardware component (i.e., with respect to the overall logical or software organization of a computer) with the physical location of the hardware computer in the computer. (Application, page 2, line 22 to page 3, line 2).

Embodiments consistent with the invention, on the other hand, address the drawbacks of conventional systems by providing a GUI-based hardware component management environment offering greater usability, flexibility and functionality than conventional GUI-based environments. Fig. 10 of the application (reproduced below), illustrates an exemplary pictorial representation of a physical computer system as might be generated by an embodiment of the invention. In particular, Fig. 10 illustrates the disk units on a multi-user computer such as an AS/400 midrange computer available from International Business Machines Corporation:

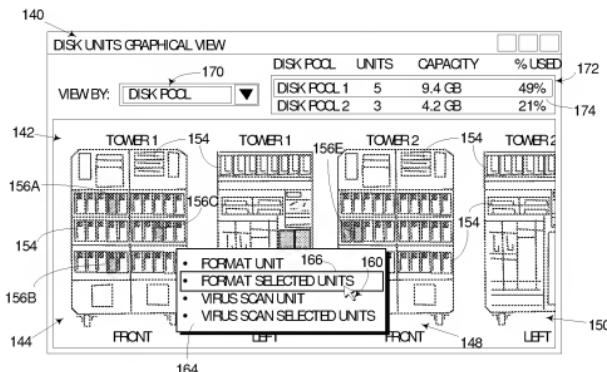


FIG. 10

Fig. 10 illustrates pictorial representations of a pair of towers 1 and 2. It may also be seen that each tower includes a pair of diagrams representing different views of the same tower. For tower 1, diagram 144 represents a front view, while diagram 146 depicts a left side view. Likewise, for tower 2, a diagram 148 displays a front view, while a diagram 150 displays a left side view. A wide variety of hardware components, e.g., disk units, are represented within each diagram at 154 in such a manner that the physical locations of those units within the actual towers are readily ascertainable by technical personnel. (Application, page 18, lines 21-27).

As noted above, one important aspect of the invention is the indication of a selected status of multiple hardware components in a pictorial representation. In the case of the system illustrated in Fig. 10, for example, this indication is provided in the form of highlighting, as represented at 156a-156e. Of note, this highlighting is applied to those portions of the pictorial representation that depict the physical configurations of the selected components (Id.)

The selection of individual hardware components may be performed in response to user input directed to the pictorial representations of those components, e.g., by pointing a mouse at a pictorial representation and clicking a mouse button. Another manner of selecting hardware components, however, is that of selecting all hardware components meeting a particular filter criterion, e.g., by comparing attributes of the hardware components with the filter criterion. For example, a user may wish to input a filter or search criterion, e.g., via a dialog box or other user input control, to perform different types of searches on the available hardware components (e.g., select all disk units that are 80GB in size).

Also, in addition to the user input of search or filter criterion, a component manager may define one or more predetermined “views” associated with particular filter criterion, e.g., for viewing different types of objects such as disk drives, network adaptors, work station controllers, etc. (Application, page 17, lines 11-23). A filter criterion may be selected from a plurality of predetermined filter criteria with each filter criterion associated with a predetermined view among a plurality of views. As described, for example, at page 17 of the Application, by providing multiple filter criteria, different views may be defined to view different types of components, e.g., disk drives, network adapters, work station controllers, etc.

In addition, where multiple diagrams are supported, functionality may be provided to hide any diagrams not associated with any selected hardware components. By doing so, widely different views may be displayed based upon the context of what information a user is attempting to obtain, offering greater flexibility and reducing the complexity of a pictorial representation in a sophisticated computer system. (Application, page 16, lines 3-7; page 17, lines 24-30).

Another aspect of the invention relates to performing management operations on multiple hardware components collectively. For example, where multiple hardware components are selected in the manner described above, a user may be permitted to collectively initiate management operations on all of the selected components so that the same operations are

initiated for all of such components, even if the components are disposed in different computers. (Application, page 22, lines 25 to page 23, line 10). A management operation may be performed, for example, on all of the multiple hardware components that have a selected status responsive to user input. (Application, page 22, lines 13-14).

Furthermore, where multiple hardware components are selected, it may be desirable to generate context-sensitive menus that apply to one or more of the selected hardware components. Fig. 10 above, for example, illustrates a context menu 164 generated as a result of clicking on item 156c with a pointer 160. A variety of available actions may be displayed to a user, e.g., formatting a disk unit, formatting all selected disk units, performing a virus scan operation on the unit or performing a virus scan on all of the selected units, among a wide variety of other component-appropriate actions. (Id.).

For the convenience of the Board, each of the independent claims has been reproduced below and annotated with references to the specification and drawings to satisfy the requirement to concisely explain the claimed subject matter:

Independent Claim 1

1. A method of managing computer hardware components, the method comprising:
 - (a) displaying a pictorial representation on a computer display, the pictorial representation associated with a plurality of hardware components and representing a physical configuration of each of the plurality of hardware components that conveys a relative placement and location of at least a subset of the hardware components in physical space, wherein each of the plurality of hardware components is associated with at least one attribute; (Application, FIG. 5; page 4, lines 1-22; page 10, lines 1-11; pages 10-11, lines 31-5)
 - (b) in response to user input, indicating a selected status for multiple hardware components from the plurality of hardware components within the pictorial representation associated with the plurality of hardware components, wherein indicating the selected status includes (Application, FIG. 3, page 11, lines 2-9; page 13, lines 23-28; page 15, lines 11-22):
 - (1) selecting a filter criterion from a plurality of predetermined filter criteria, each of the plurality of predetermined filter criteria associated with a

predetermined view among a plurality of views (Application, FIG. 3, page 13, lines 23-28; pages 16-17, lines 27-5);

(2) comparing attributes associated with the plurality of hardware components against the selected filter criterion (Application, page 11, lines 10-20); and

(3) selecting those hardware components associated with attributes that match the selected filter criterion, wherein the pictorial representation continues to depict at least one non-selected hardware component after such selection (Application, page 15, lines 11-22);

(c) after indicating the selected status for the multiple hardware components, dynamically retrieving a list of available management operations associated with at least two selected hardware components among the multiple hardware components having a selected status, wherein the list of available management operations includes only management operations that are appropriate for being performed on all of the multiple hardware components having a selected status (Application, page 4, lines 15-22; FIG. 8-9; pages 20-21, lines 15-4);

(d) displaying the list of available management operations within a context sensitive menu after indicating the selected status for the multiple hardware components (Application, FIG. 8-9; pages 20-21, lines 15-4); and

(e) performing a management operation from among the list of available management operations on all of the multiple hardware components that have a selected status responsive to user input directed to the context sensitive menu (Application, FIG. 8; pages 20-21, lines 15-4; page 22, lines 6-22; FIG. 9-10).

Independent Claim 23

23. (Previously Presented) An apparatus (Application, page 7, lines 1-10), comprising:

(a) a memory (Application, page 7, lines 11-14); and

(b) a program resident in the memory and configured to display a pictorial representation on a computer display, the pictorial representation associated with a plurality of hardware components and representing a physical configuration of each of the plurality of hardware components that conveys a relative placement and location of at

least a subset of the hardware components in physical space, wherein each of the plurality of hardware components is associated with at least one attribute (Application, FIG. 5; page 4, lines 1-22; page 10, lines 1-11; page 10, line 31 to page 11, line 5), the program further configured to indicate, in response to user input, a selected status for multiple hardware components from the plurality of hardware components within the pictorial representation associated with the plurality of hardware components; (Application, FIG. 3, page 11, lines 2-9; page 13, lines 23-28; page 15, lines 11-22) to dynamically retrieve a list of available management operations associated with at least two selected hardware components among the multiple hardware components having a selected status after indicating the selected status for the multiple hardware components; (Application, page 4, lines 15-22; FIG. 8-9; page 20 line 15 to page 21, line 4) to display the list of available management operations within a context sensitive menu after indicating the selected status for the multiple hardware components (Application, FIG. 8-9, page 20 line 15 to page 21, line 4); and to perform a management operation from among the list of available management operations on all of the multiple hardware components that have a selected status responsive to user input directed to the context sensitive menu (Application, FIG. 8; page 20, line 15 to page 21, line 4; page 22, lines 6-22; FIGS. 8-10), wherein the program is configured to indicate the selected status by selecting a filter criterion from a plurality of predetermined filter criteria, comparing attributes associated with the plurality of hardware components against the selected filter criterion (Application, FIG. 3, page 13, lines 23-28; page 16 line 27 to page 17, line 5) and selecting those hardware components associated with attributes that match the selected filter criterion, wherein the pictorial representation continues to depict at least one non-selected hardware component after such selection (Application, page 15, lines 11-22), wherein each of the plurality of predetermined filter criteria is associated with a predetermined view among a plurality of views, and wherein the list of available management operations includes only management operations that are appropriate for being performed on all of the multiple hardware components having a selected status (Application, page 4, lines 15-22; FIG. 8-9; page 20, line 15 to page 21, line 4).

Independent Claim 40

40. (Previously Presented) A program product (Application, page 8, lines 13-30), comprising:

(a) a program configured to display a pictorial representation on a computer display, the pictorial representation associated with a plurality of hardware components and representing a physical configuration of each of the plurality of hardware components, that conveys a relative placement and location of at least a subset of the hardware components in physical space, wherein each of the plurality of hardware components is associated with at least one attribute (Application, FIG. 5; page 4, lines 1-22; page 10, lines 1-11; page 10, line 31 to page 11, line 5), the program further configured to indicate, in response to user input, a selected status for multiple hardware components from the plurality of hardware components within the pictorial representation associated with the plurality of hardware components (Application, FIG. 3, page 11, lines 2-9; page 13, lines 23-28; page 15, lines 11-22); to dynamically retrieve a list of available management operations associated with at least two selected hardware components among the multiple hardware components having a selected status, after indicating the selected status for the multiple hardware components (Application, page 4, lines 15-22; FIG. 8-9; page 20, line 15 to page 21, line 4); to display the list of available management operations within a context sensitive menu after indicating the selected status for the multiple hardware components (Application, FIG. 8-9; page 20, line 15 to page 21 line 4); and to perform a management operation from among the list of available management operations on all of the multiple hardware components that have a selected status responsive to user input directed to the context sensitive menu (Application, FIG. 8; page 20, line 15 to page 21, line 4; page 22, lines 6-22; FIGS.8-10), wherein the program is configured to indicate the selected status by selecting a filter criterion from a plurality of predetermined filter criteria, comparing attributes associated with the plurality of hardware components against the selected filter criterion (Application, FIG. 3, page 13, lines 23-28; page 16, line 27 to page 17, line 5), and selecting those hardware components associated with attributes that match the selected filter criterion, wherein the pictorial representation continues to depict at least one non-selected hardware component after such selection (Application, page 15, lines 11-22), wherein each of the plurality of predetermined filter criteria is associated with a predetermined view among a plurality of

views, and wherein the list of available management operations includes only management operations that are appropriate for being performed on all of the multiple hardware components having a selected status (Application, page 4, lines 15-22; FIG. 8-9; page 20, line 15 to page 21, line 4); and

(b) a physical computer readable signal bearing medium bearing the program (Application, page 8, lines 21-30).

Other support for the claimed subject matter may generally be found in FIGS. 4-10 and the accompanying text at pages 12-23 of the Application as filed. In addition, it should be noted that, as none of the claims recite any means plus function or step plus function elements, no identification of such elements is required pursuant to 37 CFR §41.37(c)(1)(v). Furthermore, there is no requirement in 37 CFR §41.37(c)(1)(v) to provide support for the subject matter in the separately argued dependent claims, as none of these claims recite means plus function or step plus function elements, and so no discussion of any of these claims is provided.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-4, 8-12, 14-16, 18-26, 30-32, 34, 35 and 37-41 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 6,535,227 to Fox et al. (hereinafter Fox), U.S. Patent No. 7, 107, 534 to de Jong et al. (hereinafter de Jong), and U.S. Patent No. 6, 384, 842 to DeKoning et al. (hereinafter DeKoning).

VII. ARGUMENT

Applicants respectfully submit that the Examiner's rejections of claims 1-4, 8-12, 14-16, 18-26, 30-32, 34, 35 and 37-41 are not supported on the record, and should be reversed. All such claims have been rejected as obvious over the prior art cited by the Examiner. Based upon the Supreme Court's decision in *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007), a *prima facie* showing of obviousness still requires that the Examiner establish that the differences between a claimed invention and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to

a person having ordinary skill in the art." 35 U.S.C. §103(a). Such a showing requires that all claimed features be disclosed or suggested by the prior art. Four factors generally control an obviousness inquiry: 1) the scope and content of the prior art; 2) the differences between the prior art and the claims; 3) the level of ordinary skill in the pertinent art; and 4) secondary considerations of non-obviousness, such as commercial success of products covered by the patent claims, a long felt but unresolved need for the invention, and failed attempts by others to make the invention. *KSR*, 127 S. Ct. at 1734 (quoting *Graham v. John Deere Company*, 383 U.S. 1, 17-18 (1966)) ("While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.").

Moreover, in *KSR*, the Court explained that "[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue" and "[t]o facilitate review, this analysis should be made explicit." *KSR*, 127 S. Ct. at 1740-41 citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness"). But, not every combination is obvious "because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." *KSR*, 127 S. Ct. at 1741.

As a result, after *KSR*, while there is no rigid requirement for an explicit "teaching, suggestion or motivation" to combine references, there still must be some evidence of "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does" in an obviousness determination. *KSR*, 127 S. Ct. at 1731.

Applicants respectfully submit that, in the instant case, the Examiner has failed to establish obviousness as to claims 1-4, 8-12, 14-16, 18-26, 30-32, 34, 35 and 37-41, and as such, the rejections thereof should be reversed. Indeed, the combination of Fox, de Jong and DeKoning still does not teach or suggest each and every element of the pending claims, which is a requirement that has not changed after *KSR*.

Applicants' remarks in rebuttal to the Examiner's rejections are presented below, starting with the relevant independent claims. In some cases, specific discussions of particular claims are not made in the interests of streamlining the appeal. The omission of a discussion with respect to any particular claim, however, should not be interpreted as an acquiescence as to the merits of the Examiner's rejection of the claim, particularly with respect to claims reciting features that are addressed in connection with the rejections applied to other claims pending in the appeal.

A. Claims 1-4, 8-12, 14-16, 18-26, 30-32, 34, 35 and 37-41 are nonobvious in view of the combination of Fox, De Jong, and DeKoning

Independent Claim 1

Claim 1 generally recites a method for managing computer hardware components by displaying a pictorial representation on a computer display, the pictorial representation associated with a plurality of hardware components and representing a physical configuration of each of the plurality of hardware components. Claim 1 additionally recites, among other features, the following additional concepts:

-each of the plurality of hardware components is associated with at least one attribute;

-indicating the selected status includes: (1) selecting a filter criterion from a plurality of predetermined filter criteria, each of the plurality of predetermined filter criteria associated with a predetermined view among a plurality of views; (2) comparing attributes associated with the plurality of hardware components against the selected filter criterion; and (3) selecting those hardware components associated with attributes that match the selected filter criterion, wherein the pictorial representation continues to depict at least one non-selected hardware component after such selection;

-dynamically retrieving the list of available management operations is performed after indicating the selected status for the multiple hardware components;

-the list of available management operations includes only management operations that are appropriate for being performed on all of the multiple hardware components having a selected status;

- displaying the list of available management operations within a context sensitive menu after indicating the selected status for the multiple hardware components; and
- the management operation is performed responsive to user input directed to the context sensitive menu.

Consequently, claim 1 covers a scenario where a user selects a filter criteria that is associated with a view from among a plurality of views, which results in that filter criterion being applied to select those hardware components having attributes that match the filter criterion. As a result of this selection, the pictorial representation indicates the selected status of the selected hardware components, while still displaying non-selected hardware components. Then, after the selected status is indicated on the pictorial representation, a list of available management operations, which includes only those operations that are appropriate for being performed on all of the selected hardware components, is dynamically retrieved and displayed within a context sensitive menu. A management operation is then performed in response to user input directed to the context sensitive menu.

In rejecting the claims, the Examiner relies on Fox, de Jong, and DeKoning. This combination of references, however, falls short of disclosing or suggesting each and every feature of claim 1. First, the proposed combination fails to disclose or suggest the concept of selecting a filter criteria from among a plurality of filter criteria. The Examiner argues that Fox discloses selecting a filter criteria from among a plurality of filter criteria, citing cols. 8-9. However, this passage in Fox, which relates to Figs. 8A and 8B, discloses configuration dialogs that are displayed for the purpose of setting security and other parameters for a single node in the Fox system. Neither dialog box is directed to selecting nodes, much less doing so based upon one of a plurality of filter criteria associated with different “views” as is recited in claim 1. In addition, Fig. 9, which illustrates the result of establishing a security posture for a system, illustrates coloring nodes based upon security risk. This highlighting of nodes, however, does not occur for the purpose of “selecting” a node for performing a management operation thereon, so Applicants submit this highlighting is not of user selected nodes. Consequently, Applicants submit that Fox does not disclose or suggest the selection of a filter criterion from among a plurality of filter criterion associated with different views, comparing attributes of components against the filter criterion and selecting those components that match the filter criterion, as

required by claim 1. In addition, Applicants can find no similar disclosure in either of de Jong or DeKoning, so Applicants submit neither reference adds anything to the rejection in this regard.

Indeed, the Examiner cites FIG. 8 and col. 9, lines 6-19 of de Jong in this regard.

However, these cited materials disclose an Enterprise Monitor and a Customized Monitor, and none of them select more than one component. For example, FIG. 9 is similar to FIG. 8, and, all the wording and the example in FIG. 9 indicate that only one component may be monitored at a time. Specifically, FIG. 9 expressly states “Select the Component you want to monitor” and “Drag the component you want to monitor from the Enterprise Window into this field”.

Moreover, only one component is shown, namely, a Host y:Digital Z3. The filtering criterion in claim 1, however, is for multiple hardware components, not for a single component.

Furthermore, because only one component is illustrated, by default a non-selected hardware component is not displayed in the pictorial representation. Second, the proposed combination fails to disclose or suggest the concept of, after a selected status is indicated on a pictorial representation, dynamically retrieving and displaying a list of available management operations that includes only those operations that are appropriate for being performed on all of the selected hardware components. The Examiner admits that Fox does not disclose specific management operations that are performed on all the multiple hardware components where the dynamically retrieved list of management operations are associated with multiple hardware components. For this proposition, the Examiner cites the same material in de Jong, namely, FIG. 8 and col. 9, lines 6-19. However, what the Examiner is classifying as a dynamically retrieved list of management operations merely appears to be static dialog boxes. This argument is bolstered by the fact that each of the five variables is illustrated, and the user may place an “x” if they want that variable. Indeed, all five variables were illustrated in FIG. 8, prior to any hardware component, and again in FIG. 9, after a component was illustrated.

Furthermore, the Examiner cites FIG. 11 for allegedly disclosing management operations that are only appropriate for being performed on the hardware that is component selected.

However, this statement misses the point because claim 1 expressly states “performing a management operation from among the list of available management operations on all of the multiple hardware components that have a selected status...”. FIG. 11 only has one component, an array, and there is no indication that the selected instruction will be performed on all components that have a selected status, especially because only one appears to be selected. Col.

9, lines 40 to 67, which indicate context sensitive menus, does not appear to support the Examiner either.

De Jong has other deficiencies. For example, FIGS. 12 and 13 cited by the Examiner for displaying non-selected components while the Enterprise windows display the selected hardware does not address the claim limitation that states “the pictorial representation continues to depict at least one non-selected hardware component after such selection”. De Jong has two, not one, pictorial representation. Thus, the selected and non-selected components are not on the same pictorial representation as per the Examiner’s statement.

As with Fox and de Jong, DeKoning also appears to lack any disclosure or suggestion relating to the concept of dynamically retrieving a list of available management operations suitable for multiple selected hardware components, and displaying the list of available management operations in a context sensitive menu, after indicating a selected status for the multiple hardware components. Accordingly, DeKoning adds nothing to the rejection in this regard.

Applicants therefore respectfully submit that the combination of references cited by the Examiner fails to disclose or suggest the aforementioned features recited in claim 1. In addition, the Examiner has presented no objective reason why one of ordinary skill in the art would be motivated to modify the proposed combination to incorporate these features. Accordingly, claim 1 is non-obvious over Fox, de Jong, DeKoning, and the other prior art of record. Reversal of the Examiner’s rejection, and allowance of claim 1, and of claims 2-4, 8-12, 14-16 and 18-22 which depend therefrom, are therefore respectfully requested.

In the last Office Action, the Examiner generally attempted to rebut Applicants’ arguments regarding the nonobviousness of the claims. (September 20, 2007 Office Action, pages 20-22). For example, in response to Applicants’ argument that de Jong does not disclose where the hardware components are selected before the context sensitive menu is displayed, the Examiner argues that the specified context sensitive menu of Figure 11 would require that the array with its multiple disks would have to be selected in order for the specified and appropriate management operations to be displayed, with those management operations directly applicable to the specific array.

However, Figure 11 states that “[t]he software has selected the following 1 drive to add to the array” (emphasis added), whereas claim 1 requires selection “in response to user input....”

(emphasis added). Indeed, at the most, FIG. 11 indicates that one may drag an array from the enterprise window, such as array “Henry”. But the operations in the bottom portion are not directed towards array “Henry”, instead, they are directed to the drive that was selected by the software. As such, the following claim limitations are not satisfied: “performing a management operation from among the list of available management operations on all of the multiple hardware components that have a selected status responsive to user input directed to the context sensitive menu.”

Next, in response to Applicants’ argument that de Jong does not disclose selecting a plurality of filter criteria associated with different views, the Examiner argues that de Jong provides a dialog menu for the user to choose multiple criteria of information that would be relayed to the user. The Examiner also argues that this information is associated with the current status of distinct hardware components to which the parameters selected apply, and that the hardware components of de Jong are associated with multiple views, where the plurality of filter criteria of the selected hardware components would be associated with these views.

However, Applicants respectfully submit that any views in de Jong are not views as defined in the instant specification. For example, according to page 19, lines 1-8:

For the illustrative view, a pull-down menu 170 is illustrated providing a user-selectable list of predetermined views through which a user may view different pictorial representations of the available hardware components accessible via the component manager. The current view depicted in Fig. 5 is that of the disk units, and as such, only diagrams within which active disk units capable of being managed by the component manager are displayed. Moreover, it will be appreciated that window 140 may include additional information in association with a pictorial representation to facilitate the component management of the disk units.

Indeed, Applicants’ views illustrate pictorial representations of the available hardware, whereas de Jong simply illustrates icons. Moreover, the icons in FIG. 12 of de Jong do not convey a relative placement and location of at least a subset of the hardware components in physical space. If that were the case, FIG. 12 of de Jong, for example, would have to indicate that the various icons displayed in the figure are actually physically positioned in those relative locations, a relationship that is unquestionably not the case.

Lastly, in response to Applicants' argument that there is no motivation to combine Fox, De Jong, and DeKoning, the Examiner argues that the three references are within the field of hardware components configuration and provide an efficient user interface for the management of these components. Furthermore, the Examiner argues that the features disclosed in de Jong and DeKoning would have been obvious to a person of ordinary skill in the art to pursue the known options provided in de Jong and DeKoning to provide more options for hardware configuration in Fox. And based on this argument, the Examiner argues that the combination of Fox, de Jong, and DeKoning would have been obvious in view of the nature of the field of the user interfaces in hardware configuration systems.

However, Applicants maintain that one of ordinary skill in the art would not be motivated to modify Fox, for example, to incorporate a dynamically-retrieved list of available management operations. De Jong, in particular, does not suggest any such modification, because the "select drives" dialog box shown in FIGS. 28-29 would require the exact same operations to be offered to the user irrespective of what drives are selected by the user. In addition, the components at issue (the drives) are all identical to one another, so there would be no need to dynamically retrieve a list based upon what components are selected by a user in de Jong.

Applicants therefore respectfully request that the Examiner's rejection of claim 1 be reversed, and that the claim be allowed over the art of record.

Independent Claims 23 and 40

Next, with regard to the rejections of independent claims 23 and 40, each of these claims recites, similar to claim 1, the concepts of selection of a filter criterion from among a plurality of filter criterion associated with different views, comparing attributes of components against the filter criterion, and selecting those components that match the filter criterion. Additionally, claims 23 and 40 also include the concepts of dynamically retrieving a list of available management operations suitable for multiple selected hardware components, and displaying the list of available management operations in a context sensitive menu, after indicating a selected status for the multiple hardware components. As discussed above in connection with claim 1, this combination of features is not disclosed or suggested in Fox, de Jong, and DeKoning, whether taken alone or in combination. Accordingly, Applicants submit that claims 23 and 40 are nonobvious over the prior art of record for the same reasons as presented above in connection

with claim 1. Reversal of the Examiner's rejections, and allowance of claims 23 and 40, and of claims 24-26, 30-32, 34-35, and 37-39, and 41, which depend therefrom, are therefore respectfully requested.

Dependent Claims 2 and 24

Claims 2 and 24 are not argued separately.

Dependent Claims 3 and 25

Claims 3 and 25 respectively depend from claims 2 and 24. Claim 3 is representative, and recites that the first diagram depicts a first view of the enclosure taken from a first viewpoint, and that the pictorial representation further includes a second diagram depicting a second view of the enclosure taken from a second viewpoint. Claim 2 recites that the pictorial representation includes a diagram of at least one enclosure within which the plurality of hardware components is disposed, the diagram further depicting a physical location of each of the plurality of hardware components in the enclosure.

In rejecting claim 3, the Examiner cites col. 5, lines 32-38 of DeKoning, relating to graphical representations of (i) subsystems on a display screen in FIG. 2 and (ii) components of the subsystems provided separately on a display screen for desired arrangement relative to each other in FIG. 4. First, the two figures of DeKoning (reproduced below) are not illustrated in one pictorial representation. Second, even if the figures can be in the same pictorial representation, the two figures do not disclose or suggest diagrams or enclosures as defined in claim 3. As indicated in claim 2, the enclosure has a plurality of hardware components disposed within, and the diagram depicts a physical location of each of the plurality of hardware components in the enclosure. However, because FIG. 2 does not depict the components of subsystem 2, FIG. 2 does not illustrate an enclosure or a diagram (from a viewpoint). Moreover, although FIG. 3 does depict the components of subsystem 2, FIG. 3 is not another viewpoint of an enclosure because subsystem 2 in FIG. 2 is not an enclosure.

BUILDING / ROOM : ALPHA / BETA

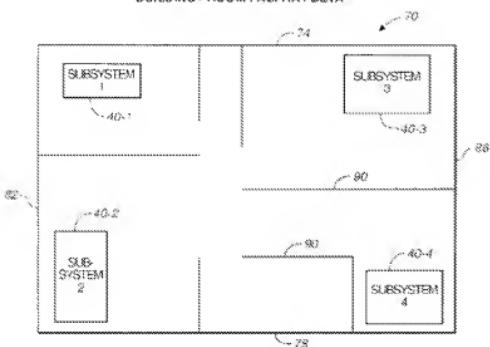


FIG. 2

SUBSYSTEM 2 COMPONENTS

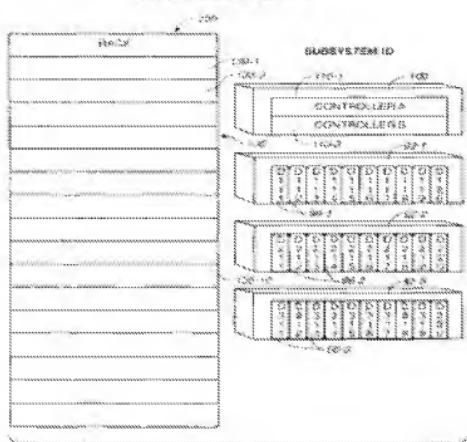


FIG. 3

Indeed, FIG. 10 (reproduced below) and the accompanying text at page 18, lines 21-25, illustrate multiple diagrams of an enclosure from different viewpoints.

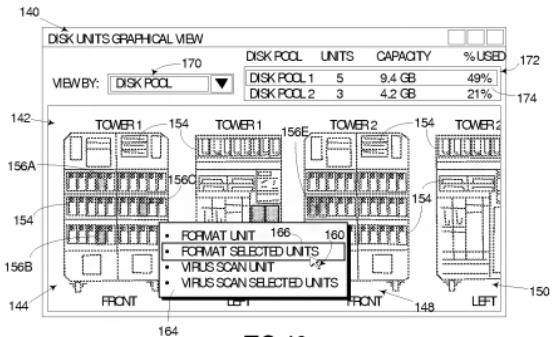


FIG. 10

As such, Applicants submit that claims 3 and 25 are non-obvious over Fox, de Jong, DeKoning, and the rejections thereof should be reversed.

Dependent Claims 4, 8, 9 10, 26, and 30

Claims 4, 8, 9 10, 26, and 30 are not argued separately.

Dependent Claims 11 & 31

Claims 11 & 31 respectively depend from claims 1 and 23. Claim 11 is representative, and recites visually highlighting those portions of the pictorial representation that depict the physical configurations of the multiple hardware components that have a selected status. As explained above, Fox deals with illustrating the result of establishing a security posture for a system by coloring nodes based upon security risk. This highlighting of nodes, however, does not occur for the purpose of “selecting” a node for performing a management operation thereon, so Applicants submit this highlighting is not of user selected nodes, or selected status as required by claim 11.

As such, Applicants submit that claims 11 & 31 are non-obvious over Fox, de Jong, DeKoning, and the rejections thereof should be reversed.

Dependent Claims 12, 14, 15, 32, and 34

Claims 12, 14, 15, 32, and 34 are not argued separately.

Dependent Claims 16 and 35

Claims 16 and 35 respectively depend from claims 1 and 23. Claim 16 is representative, and recites dynamically retrieving the list of available management operations is performed in response to user input directed to that portion of the pictorial representation that depicts the physical configuration of at least one of the at least two selected hardware components.

The Examiner cites FIG. 8 of Fox, relating to node 1. Even assuming *arguendo*, that the prior art of reference discloses or suggests dynamically retrieving the list, which Applicants maintain they do not, node 1 is a single hardware component. Moreover, there is no other hardware component illustrated in FIG. 8, and claim 16 clearly requires at least two selected hardware components.

As such, Applicants submit that claims 16 and 35 are non-obvious over Fox, de Jong, DeKoning, and the rejections thereof should be reversed.

Dependent Claims 18 and 37

Claims 18 and 37 are not argued separately.

Dependent Claim 19

Claim 19 depends from claim 18. Claim 19 recites that the user input includes locating a user-manipulated pointer over that portion of the pictorial representation that depicts the physical configuration of the first hardware component, the method further comprising displaying the retrieved status information within a pop-up window disposed proximate that portion of the pictorial representation that depicts the physical configuration of the first hardware component.

The Examiner cites col. 8, lines 64-67 of Fox, which is related to FIG. 8A. However, FIG. 8A (reproduced below) merely illustrates that the sensitivity of node 1 can be adjusted to unclassified, sensitive, confidential, secret, restricted secret, or top secret. However, none of these illustrates the retrieved status of node 1. For example, is node 1 currently confidential? Nonetheless, the cited passages and figure are unlike block 162 in Applicants' FIG. 5, which clearly illustrates that the retrieved status is "active".

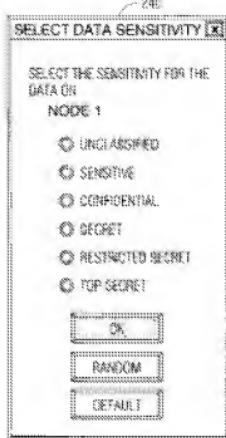


FIG. 8A

As such, Applicants submit that claim 19 is non-obvious over Fox, de Jong, DeKoning, and the rejection thereof should be reversed.

Dependent Claims 20, 21, 22, 38, 39 and 41

Claims 20, 21, 22, 38, 39 and 41 are not argued separately.

CONCLUSION

Applicants respectfully request that the Board reverse the Examiner's rejections of claims 1-4, 8-12, 14-16, 18-26, 30-32, 34, 35 and 37-41, and that the Application be passed to issue. If there are any questions regarding the foregoing, please contact the undersigned at 513/241-2324. If any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000. Applicants note that this Appeal Brief is timely filed because it was due on Saturday, March 22, 2008, and is being filed on Monday, March 24, 2008.

Respectfully submitted,

March 24, 2008
Date

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VIII. CLAIMS APPENDIX: CLAIMS ON APPEAL (S/N 10/911,844)

Listing of Claims:

1. (Previously Presented) A method of managing computer hardware components, the method comprising:
 - (a) displaying a pictorial representation on a computer display, the pictorial representation associated with a plurality of hardware components and representing a physical configuration of each of the plurality of hardware components that conveys a relative placement and location of at least a subset of the hardware components in physical space, wherein each of the plurality of hardware components is associated with at least one attribute;
 - (b) in response to user input, indicating a selected status for multiple hardware components from the plurality of hardware components within the pictorial representation associated with the plurality of hardware components, wherein indicating the selected status includes:
 - (1) selecting a filter criterion from a plurality of predetermined filter criteria, each of the plurality of predetermined filter criteria associated with a predetermined view among a plurality of views;
 - (2) comparing attributes associated with the plurality of hardware components against the selected filter criterion; and
 - (3) selecting those hardware components associated with attributes that match the selected filter criterion, wherein the pictorial representation continues to depict at least one non-selected hardware component after such selection;
 - (c) after indicating the selected status for the multiple hardware components, dynamically retrieving a list of available management operations associated with at least two selected hardware components among the multiple hardware components having selected status, wherein the list of available management operations includes only management operations that are appropriate for being performed on all of the multiple hardware components having a selected status;

- (d) displaying the list of available management operations within a context sensitive menu after indicating the selected status for the multiple hardware components; and
- (e) performing a management operation from among the list of available management operations on all of the multiple hardware components that have a selected status responsive to user input directed to the context sensitive menu.

2. (Original) The method of claim 1, wherein the pictorial representation includes a diagram of at least one enclosure within which the plurality of hardware components is disposed, the diagram further depicting a physical location of each of the plurality of hardware components in the enclosure.

3. (Original) The method of claim 2, wherein the first diagram depicts a first view of the enclosure taken from a first viewpoint, and wherein the pictorial representation further includes a second diagram depicting a second view of the enclosure taken from a second viewpoint.

4. (Original) The method of claim 2, wherein at least one of the plurality of hardware components comprises an unused interface component configured to physically interconnect with another hardware component, the method further comprising managing the unused interface component through user input directed to the pictorial representation.

5.-7. (Canceled).

8. (Previously Presented) The method of claim 1, wherein each hardware component is associated with a hardware type, and wherein the filter criterion identifies a selected hardware type, wherein selecting those hardware components includes selecting those hardware components associated with the selected hardware type.

9. (Previously Presented) The method of claim 1, further comprising updating the indication of the selected status for at least one of the multiple hardware components responsive to selection of those hardware components associated with attributes that match the filter criterion.
10. (Previously Presented) The method of claim 1, wherein each of the plurality of hardware components is associated with at least one of a plurality of diagrams, each of which depicting a physical location of at least one of the plurality of hardware components, the method further comprising displaying within the pictorial representation only those diagrams from the plurality of diagrams that depict the physical location of at least one hardware component having a selected status.
11. (Original) The method of claim 1, further comprising visually highlighting those portions of the pictorial representation that depict the physical configurations of the multiple hardware components that have a selected status.
12. (Original) The method of claim 1, further comprising updating the status of a first hardware component among the plurality of hardware components to one of a selected and an unselected status responsive to user input directed to that portion of the pictorial representation that depicts the physical configuration of the first hardware component.
13. (Canceled).
14. (Previously Presented) The method of claim 1, wherein the multiple hardware components are physically located in a plurality of computers, wherein performing the management operation includes performing the management operation in each of the plurality of computers.

15. (Original) The method of claim 14, wherein at least two of the plurality of computers utilize different types of computer platforms.

16. (Previously Presented) The method of claim 1, wherein dynamically retrieving the list of available management operations is performed in response to user input directed to that portion of the pictorial representation that depicts the physical configuration of at least one of the at least two selected hardware components.

17. (Canceled).

18. (Original) The method of claim 1, further comprising retrieving status information associated with a first hardware component among the plurality of hardware components in response to user input directed to that portion of the pictorial representation that depicts the physical configuration of the first hardware component.

19. (Original) The method of claim 18, wherein the user input includes locating a user-manipulated pointer over that portion of the pictorial representation that depicts the physical configuration of the first hardware component, the method further comprising displaying the retrieved status information within a pop-up window disposed proximate that portion of the pictorial representation that depicts the physical configuration of the first hardware component.

20. (Original) The method of claim 1, wherein displaying the pictorial representation and indicating the selected status are performed on a first computer, and wherein each of the plurality of hardware components is physically located in the first computer.

21. (Original) The method of claim 1, wherein displaying the pictorial representation and indicating the selected status are performed on a first computer, and wherein at least a portion of the plurality of hardware components are physically located in a second computer in communication with the first computer.

22. (Original) The method of claim 1, wherein each of the plurality of hardware components is disposed in a computer selected from the group consisting of a single-user computer, a multi-user computer, a clustered computer, a multi-unit computer, and combinations thereof.

23. (Previously Presented) An apparatus, comprising:

(a) a memory; and

(b) a program resident in the memory and configured to display a pictorial representation on a computer display, the pictorial representation associated with a plurality of hardware components and representing a physical configuration of each of the plurality of hardware components that conveys a relative placement and location of at least a subset of the hardware components in physical space, wherein each of the plurality of hardware components is associated with at least one attribute, the program further configured to indicate, in response to user input, a selected status for multiple hardware components from the plurality of hardware components within the pictorial representation associated with the plurality of hardware components; to dynamically retrieve a list of available management operations associated with at least two selected hardware components among the multiple hardware components having a selected status after indicating the selected status for the multiple hardware components; to display the list of available management operations within a context sensitive menu after indicating the selected status for the multiple hardware components; and to perform a management operation from among the list of available management operations on all of the multiple hardware components that have a selected status responsive to user input directed to the context sensitive menu, wherein the program is configured to indicate the selected status by selecting a filter criterion from a plurality of predetermined filter criteria, comparing attributes associated with the plurality of hardware components against the selected filter criterion, and selecting those hardware components associated with attributes that match the selected filter criterion, wherein the pictorial representation continues to depict at

least one non-selected hardware component after such selection, wherein each of the plurality of predetermined filter criteria is associated with a predetermined view among a plurality of views, and wherein the list of available management operations includes only management operations that are appropriate for being performed on all of the multiple hardware components having a selected status.

24. (Original) The apparatus of claim 23, wherein the pictorial representation includes a diagram of at least one enclosure within which the plurality of hardware components is disposed, the diagram further depicting a physical location of each of the plurality of hardware components in the enclosure.

25. (Original) The apparatus of claim 24, wherein the first diagram depicts a first view of the enclosure taken from a first viewpoint, and wherein the pictorial representation further includes a second diagram depicting a second view of the enclosure taken from a second viewpoint.

26. (Original) The apparatus of claim 24, wherein at least one of the plurality of hardware components comprises an unused interface component configured to physically interconnect with another hardware component, wherein the program is further configured to manage the unused interface component through user input directed to the pictorial representation.

27.-29. (Canceled).

30. (Original) The apparatus of claim 23, wherein each of the plurality of hardware components is associated with at least one of a plurality of diagrams, each of which depicting a physical location of at least one of the plurality of hardware components, wherein the program is further configured to display within the pictorial representation only those diagrams from the

plurality of diagrams that depict the physical location of at least one hardware component having a selected status.

31. (Original) The apparatus of claim 23, wherein the program is further configured to visually highlight those portions of the pictorial representation that depict the physical configurations of the multiple hardware components that have a selected status.

32. (Original) The apparatus of claim 23, wherein the program is further configured to update the status of a first hardware component among the plurality of hardware components to one of a selected and an unselected status responsive to user input directed to that portion of the pictorial representation that depicts the physical configuration of the first hardware component.

33. (Canceled).

34. (Previously Presented) The apparatus of claim 23, wherein the multiple hardware components are physically located in a plurality of computers, wherein the program is further configured to perform the management operation by performing the management operation in each of the plurality of computers.

35. (Previously Presented) The apparatus of claim 23, wherein the program is further configured to dynamically retrieve the list of available management operations in response to user input directed to that portion of the pictorial representation that depicts the physical configuration of at least one of the at least two selected hardware components.

36. (Canceled).

37. (Original) The apparatus of claim 23, wherein the program is further configured to retrieve status information associated with a first hardware component among the plurality of

hardware components in response to user input directed to that portion of the pictorial representation that depicts the physical configuration of the first hardware component.

38. (Original) The apparatus of claim 23, wherein the program is resident on the same computer as the plurality of hardware components.

39. (Original) The apparatus of claim 23, wherein at least one of the plurality of hardware components is physically located on a different computer from that within which the program is resident.

40. (Previously Presented) A program product, comprising:

(a) a program configured to display a pictorial representation on a computer display, the pictorial representation associated with a plurality of hardware components and representing a physical configuration of each of the plurality of hardware components, that conveys a relative placement and location of at least a subset of the hardware components in physical space, wherein each of the plurality of hardware components is associated with at least one attribute, the program further configured to indicate, in response to user input, a selected status for multiple hardware components from the plurality of hardware components within the pictorial representation associated with the plurality of hardware components; to dynamically retrieve a list of available management operations associated with at least two selected hardware components among the multiple hardware components having a selected status; after indicating the selected status for the multiple hardware components; to display the list of available management operations within a context sensitive menu after indicating the selected status for the multiple hardware components; and to perform a management operation from among the list of available management operations on all of the multiple hardware components that have a selected status responsive to user input directed to the context sensitive menu, wherein the program is configured to indicate the selected status by selecting a filter criterion from a plurality of predetermined filter criteria, comparing

attributes associated with the plurality of hardware components against the selected filter criterion, and selecting those hardware components associated with attributes that match the selected filter criterion, wherein the pictorial representation continues to depict at least one non-selected hardware component after such selection, wherein each of the plurality of predetermined filter criteria is associated with a predetermined view among a plurality of views, and wherein the list of available management operations includes only management operations that are appropriate for being performed on all of the multiple hardware components having a selected status; and

(b) a physical computer readable signal bearing medium bearing the program.

41. (Previously Presented) The program product of claim 40, wherein the physical computer readable signal bearing medium includes a recordable medium.

42.-45. (Canceled).

IX. EVIDENCE APPENDIX

09/659,258

None.

X. RELATED PROCEEDINGS APPENDIX

09/659,258

None.